# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/607,577 | 06/25/2003 | Paul St. John Brittan | B-5134 621037-8 | 5778 |

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| 7590      02/05/2007<br>HEWLETT-PACKARD COMPANY<br>Intellectual Property Administration<br>P.O. Box 272400<br>Fort Collins, CO 80527-2400 | **EXAMINER**<br>WOZNIAK, JAMES S |

| ART UNIT | PAPER NUMBER |
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| 2626 | |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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| 3 MONTHS | 02/05/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>25 June 2003</u>.

2a)☐ This action is **FINAL**.　　2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1-18</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-18</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>25 June 2003</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☒ All　b)☐ Some * c)☐ None of:

　　　1.☒ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

## DETAILED ACTION

### *Drawings*

1.     The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Element 71 *(see specification, Page 4, Line 23)*. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Claim Objections*

2.     Claims 1-18 are objected to because of the following informalities:

In claim 1, line 2, "the relative average" should be changed to --a relative average-- in order to provide proper antecedent basis.

In claim 10, line 3, "the relative average" should be changed to --a relative average-- in order to provide proper antecedent basis.

The dependent claims fail to overcome the objection of claims 1 and 10, and thus, are also objected to due to minor informalities.

Appropriate correction is required.

## Claim Rejections - 35 USC § 112

3.      The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4.      **Claims 1-9** are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps.  See MPEP § 2172.01.  The omitted steps in Claim 1 are:  receiving inputs regarding input mode usage by a user, modal requirements of a dialogue manager and application, or confidence in a recognition process for each modality at a bandwidth moderator *(Specification, Page 4, Line 19- Page 5, Line 6)*; using the inputs *(see recited conditions in the body of claim 1)* to determine a target relative usage of a resource *(Specification, Page 5, Lines 12-14)*; Controlling resource allocation based on the determined relative usage *(Specification, Page 5, Lines 12-14)*; and Performing speech and/or gesture recognition using the allocated resource *(Specification, Page 6, Lines 14-22)*.  The currently claimed invention merely recites a series of input conditions with no interrelation between those input conditions.  Therefore, it is unclear as to how a resource allocation is adjusted based on a usage because there are no claimed active steps involving receiving the inputs and analyzing the inputs to make a usage determination, which is required to achieve a resource adjustment.  As such, claim 1 is rejected under U.S.C. 112, second paragraph.

Furthermore, the dependent claims fail to overcome this rejection directed toward independent

claim 1, and thus, are also rejected under 35 U.S.C. 112, second paragraph.

5.      **Claims 10-18** rejected under 35 U.S.C. 112, second paragraph, as being incomplete for

omitting essential elements, such omission amounting to a gap between the elements. See MPEP

§ 2172.01. The omitted elements in claim 10 are: the system elements for implementing the

processing steps missing in claim 1 (see above). The currently claimed invention merely recites

a series of input conditions with no interrelation between those input conditions or claimed

system elements. Therefore, it is unclear as to how a resource allocation is adjusted based on a

usage because there are no claimed elements for receiving the inputs and analyzing the inputs to

make a usage determination, which is required to achieve a resource adjustment. As such, claim

10 is rejected under U.S.C. 112, second paragraph. Furthermore, the dependent claims fail to

overcome this rejection directed toward independent claim 10, and thus, are also rejected under

35 U.S.C. 112, second paragraph.


*Claim Rejections - 35 USC § 101*


6.      35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or
> any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
> requirements of this title.

7.      **Claims 1-18** are rejected under 35 U.S.C. 101 because the claimed invention is directed

to non-statutory subject matter. More specifically, Claims 1 and 10 are directed towards

algorithm conditions for allocating resource usage, which do not define interrelated

steps/elements. In order to comply with the requirements of the 35 U.S.C. 101, the claimed

invention must achieve a useful, concrete, and tangible final result *(See "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility," final result must be useful, tangible, and concrete, Pages 37-39 and MPEP 2106)*. Since, in the present case, no active processing steps or elements are recited and only a set of algorithm conditions are claimed, no useful, concrete, and tangible result is produced. Thus, claims 1 and 10 are directed to non-statutory subject matter.

The dependent claims fail to overcome this rejection directed toward independent claims 1 and 10, and thus, are also rejected under 35 U.S.C. 101.

## *Claim Rejections - 35 USC § 102*

8.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9.      **Claims 1, 3, 9-10, 12, and 18** are rejected under 35 U.S.C. 102(e) as being anticipated by Maes et al *(U.S. Patent: 6,964,023)*.

With respect to **Claims 1 and 10**, Maes discloses:

A method and system for dynamically controlling usage of a resource by task entities respectively involved in processing different input modalities, wherein the relative average actual or allocated usage of the resource by the task entities is dynamically adjusted according to one or

more of the following: actual usage of the different modalities by a user; confidence in the results

of processing of each of the modalities; pragmatic information on mode usage *(allocating*

*computer processing resources based on in use (active) modality engines, Col. 37, Lines 4-16;*

*and Col. 35, Line 54- Col. 36, Line 7).*

With respect to **Claims 3 and 12**, Maes further discloses:

The resource is processing power *(computer processing power allocated to active*

*modality engines, Col. 37, Lines 4-16).*

With respect to **Claims 9 and 18**, Maes further recites:

Controlling the allocation of the resource between task entities *(allocating computer*

*processing resources based on in use (active) modality engines associated with a particular*

*application, Col. 37, Lines 4-16; and Col. 35, Line 54- Col. 36, Line 7).*

### *Claim Rejections - 35 USC § 103*

10.    The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

11.    **Claims 2, 4-8, 11, 13-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Maes et al in view of Bridger et al *(WO 01/35575 A2).*

With respect to **Claims 2, 4, 11, and 13**, Maes discloses the system and method for

allocating computer processing resources based on modality usage as applied to Claims 1 and 10.

Maes further discloses multiple applications associated with various modalities *(Col. 7, Lines 40-45; and Col. 31, Lines 15-34)*. Maes does not specifically suggest resources comprising communication bandwidth and memory, however Bridger discloses such resource allocation *(Page 1, Line 32- Page 2, Line 10; and Page 7, Lines 15-29)*.

Maes and Bridger are analogous art because they are from a similar field of endeavor in processing resource management for multiple input data types. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Maes with the resource management scheme taught by Bridger in order to prevent a server from overload while not wasting its usage *(Bridger, Page 1, Lines 19-30)*.

With respect to **Claims 5 and 14**, Bridger further discloses processing resources determined based on an input modality, wherein a single processing resource can be assigned to different modality types *(Page 7, Lines 7-29)*.

With respect to **Claims 6 and 15**, Bridger further recites the adjustment of related resources *(Page 7, Line 30- Page 8, Line 4)*.

With respect to **Claims 7 and 16**, Bridger further recites an allocation of resources based on a modality *(Page 7, Lines 7-14)* and further allocation for similar modality types *(Page 10, Lines 3-12)*.

With respect to **Claims 8 and 17**, Bridger further recites evenly dividing resources for all high priority tasks *(Page 9, Lines 11-23)* and further allocation for similar modality types *(Page 10, Lines 3-12)*.

## *Conclusion*

12.     The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure:

Rustad et al *(U.S. Patent: 6,009,106)-* teaches a method for dynamic bandwidth

allocation for voice and data communications.

Coffman et al *(U.S. Patent: 6,839,896)-* discloses resource and network management in a

multimodal environment.

Nguyen et al *(U.S. Patent: 6,879,954)-* teaches resource allocation based on processing

power in a speech recognition system.

Balasuriya *(US 2003/0140113)-* discloses processing load balancing in a multimodal

communication system.

Yang et al *("An Adaptive Multimodal Interface for Wireless Application," 1998)-*

discloses a method for allocating bandwidth resources in a multimodal application.


13.     Any inquiry concerning this communication or earlier communications from the

examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632.

The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David Hudspeth can be reached at (571) 272-7843. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James S. Wozniak
1/9/2007

DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600